

SAPIENS

A Brief History of HumanKind

YUVAL NOAH HARARI



READINGGRAPHICS
Ideas Come Alive

The Big “So What”





We tend to think of mankind as the unique and inevitable masters of this Universe. In reality, we were not the only human species that existed on Earth, and most of our progress happened only in the recent past. Through a detailed account of human history, Harari presents the facts and myths of how mankind has dominated the planet, the driving forces shaping our lives and how we can think about our impact on Earth.

Introduction



All humans alive today are *Homo sapiens*; we're part of the *Homo* genus (in the same family as chimpanzees, gorillas and orang-utans) and we're of the species *Sapiens* (which means “wise”). *Sapiens* have only existed for an extremely short duration of Earth's history:

-  About 13.5 billion years ago, the Big Bang brought matter, energy, time and space into this Universe. Around 300,000 years later, matter and energy fused into atoms, which then combined into molecules.
-  About 3.8 billion years ago, some molecules combined to form organisms on Earth.
 - Around 6 million years ago, human/ape-like traits emerged, and the first *Homos* appeared in Africa 2.5 million years ago. Around 100,000 years ago, there were at least 6 *Homo* species co-habiting Earth, including the *Homo erectus* and *Homo neanderthalensis*. They looked like us (especially the Neanderthals), with big brains and moved on 2 legs.

KEY QUOTES

“Just 6 million years ago, a single female ape had two daughters. One became the ancestor of all chimpanzees, the other is our own grandmother.”



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

"Homo sapiens has grown so accustomed to being the only human species that it's hard for us to conceive of any other possibility...(we) imagine that we are the epitome of creation, and that a chasm separates us from the rest of the animal kingdom."

"The truly unique feature of our language is...the ability to transmit information about things that do not exist at all."

- The first Homo sapiens appeared in East Africa about 200,000 years ago, but only started to spread outside Africa 130,000 years later. This was the start of human history, which Harari classified into 3 key revolutions: the *Cognitive Revolution* (70,000 years ago), the *Agricultural Revolution* (12,000 years ago) and the *Scientific Revolution* (500 years ago).

The Cognitive Revolution



Homos started out like other animals, foraging for plants, small insects/animals, carrion from carnivores, and occasionally hunting larger game. *Homo sapiens* were able to move to the top of the food chain mainly due to the evolution of our language.



Language and Imagination



The main factor that set *Homo sapiens* apart from other *Homo* species was probably our unique language capabilities:

- It's extremely flexible and can be combined in infinite ways to deliver complex nuances and rich information about our world.
- We use it more extensively than other animals to gossip and shape our social structures and relationships.
- Most importantly, we can imagine and communicate about things that don't exist. An ape may be able to communicate to another ape that there's a lion by the river, but only a Sapien can imagine and convey that the lion is the guardian spirit of his tribe.



This ability to conceive and communicate the imaginary allows us to engage in flexible mass-cooperation.

- Bees and ants can operate in large colonies using information stored in their DNA, but they can't change these systems easily, nor cooperate based on ideas like the glory of their species.



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

"Any large-scale human cooperation—whether a modern state, a medieval church, an ancient city or an archaic tribe—is rooted in common myths that exist only in people's collective imagination."

"Imagined orders are not evil conspiracies or useless mirages. Rather, they are the only way large numbers of humans can cooperate effectively."

"The average forager had wider, deeper and more varied knowledge of her immediate surroundings than most of her modern descendants...Survival in that era required superb mental abilities from everyone."

- Chimpanzees have social groups and alliances, but they need intimate interaction to build trust. This limits their groups to less than 100 (and typically 20-50). They also can't convince others to give up food now in order to gain salvation and unlimited food in chimp-heaven after they die.
- Humans, too, cannot handle >150 intimate relationships at any one time. However, we can conjure myths and common beliefs— be it religion, human rights or equality—to get large numbers of strangers to work together.



Most of our modern systems and institutions are built on imagined realities. A company is only real because of our imagined concepts of legal systems, profits, employees, and shareholders.

- Yet, imagined entities like nation-states and Google can reclaim land, build structures and develop new technologies to shape the real world around us.
- This frees us up to create and change our imagined reality, transforming our social structures in just 1-2 decades when other animals take thousands of years to do so via biological evolution.



Life of the Hunter-Gatherers



Agriculture and industrialization only occurred in the last 10,000- 12,000 years. Our biological, psychological and social traits were mainly shaped by how the pre-agricultural Sapiens lived.



These ancient foragers lived a nomadic lifestyle, traveling in small, intimate groups. They consumed a wide range of foods, from berries and roots to termites, rabbits and bison. They probably worked only 30-35 hours a week, gathering, hunting, preparing food and making tools etc. They were also probably animists who believed in sharing the lands with plants, animals, rocks and rivers alike.



Initially, all *Homo* species were living on the Afro-Asian landmass. With the Cognitive Revolution, Sapiens could now cross the seas/oceans. About 45,000 years ago, Sapiens flooded to other continents, bringing drastic changes to the new habitats we settled in.

- Within a few thousand years of our arrival in Australia, 23 of 24 species of large animals became extinct. Within 2,000 years of our arrival in the Americas, we brought extinction to 34 out of 47 genera of large mammals in N. America, and 50 out of 60 in S. America. Many other smaller species were also wiped out. The same happened in other places around the globe.
- Other Homo species also become extinct about 30,000 years ago.



Sapiens probably brought such massive destruction because:

- Using fire, we could destroy large stretches of ecology. As we change the vegetation and food sources, some animals thrived while others died out.
- Large animals and predators generally bred more slowly. They couldn't evolve fast enough to evade the new threat from Sapiens, nor replenish their numbers as quickly as we killed them.
- These factors amplified the impact of climate change, which already strained the ecosystem.

Sapiens are no doubt the most destructive species on earth. Each revolution brings a new wave of extinction. Soon, even the surviving species (e.g. sharks, whales) may die out.



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

"No other animal had ever moved into such a huge variety of radically different habitats so quickly, everywhere using virtually the same genes."

"Humankind ascended to the top so quickly that the ecosystem was not given time to adjust."

"Don't believe tree-huggers who claim that our ancestors lived in harmony with nature. Long before the Industrial Revolution, Homo sapiens held the record... for driving the most plant and animal species to their extinctions."

The Agricultural Revolution



Myth of a Better Life

About 10,000 years ago, we completed the transition from foraging to settle down in farms. Farming supposedly gave us a better life, but Harari calls it the biggest fraud in history.



Farming led to poorer nutrition, more diseases, much longer working hours and a tougher life for Sapiens and other animals.

- Farmers grew a limited range of crops—e.g. wheat, maize, potato, barley—because these were the easiest to grow on a large scale. Malnutrition became a common problem.
- As Sapiens domesticated animals, the most aggressive ones were culled while the fat, submissive ones were bred. Over time, chicken, sheep, pigs and cows multiplied but lived miserably. Males were castrated or mutilated to break their spirit, females were repeatedly impregnated, and most were kept in tiny space for the short periods before they were killed.



The only advantage of farming was the increase in food per unit area. This allowed humans to multiply exponentially.

- As families grew bigger, farmers cleared more and more lands, changing the landscape and driving new species to extinction. New generations grew up without knowledge of foraging and gradually, it became impossible to turn back the clock.
- Throughout history, we see mankind repeating the luxury trap. To have a better life, we seek higher productivity, which brings “luxuries” that we soon can’t live without. So, we work harder and create more tools to ease our workload, resulting in an ever-increasing pace of life.



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

“The average farmer worked harder than the average forager, and got a worse diet in return.”

“A series of trivial decisions aimed mostly at filling a few stomachs and gaining a little security had the cumulative effect of forcing ancient foragers to spend their days carrying water buckets under a scorching sun.”

“Once people get used to a certain luxury, they take it for granted. Then they begin to count on it. Finally they reach a point where they can’t live without it.”



The Agricultural Revolution also brought new imagined orders.

- With food surplus and new technology, more people were packed into villages and cities, and new kingdoms and empires were born. Myths about royalty, imperial glory and gods emerged, holding the new social structure together.
- Unlike foragers who thought of the hills and forests as their home shared with other beings, farmers defined their homes as the physical houses they lived in; pests like rats and locusts were now seen as invaders of human territories.
- Farmers constantly worried about the future. They had to plan for planting and harvesting, store food in case of poor harvests, droughts or pestilence. 90% of the population (the peasants) worked from dawn to dusk while 10% of the elites (kings, priests, officials, soldiers) enjoyed the riches.



Stories Made Real



All human systems of cooperation are built on some hierarchy between people, often involving mass oppression and exploitation.

- People are constantly being segregated, e.g. men vs women, whites vs blacks, higher vs lower castes. Today, someone may frown upon racial discrimination, yet think it's ok to have different schools for the rich vs poor.
- Hierarchies give a framework for interaction, but limit individual potential. Those in the lower rungs usually lack the chance to develop their talents/skills and have to play by a different set of rules.



Every imagined order has fictions to justify its elites' privileges and behaviors. How do we know if something is real or fiction?

- Harari recommends this rule of thumb: "Biology enables, Culture forbids". Anything that exists (e.g. homosexuality) is biologically possible and natural, even if culture claims it's prohibited. On the other hand, if humans don't photosynthesize or fly with wings, then it's biologically unnatural.



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

"While human evolution was crawling at its usual snail's pace, the human imagination was building astounding networks of mass cooperation, unlike any other ever seen on earth.

"While agricultural space shrank, agricultural time expanded."

"Most human cooperation networks have been geared toward oppression and exploitation."

"We like to see underdogs win. But there is no justice in history."

"Most people claim that their social hierarchy is natural and just, while those of other societies are based on false and ridiculous criteria."



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

"Evolution is based on difference, not equality... Equally, there are no such things as rights in biology."

"Though the imagined order exists only in our minds, it can be woven into the material reality around us, and even set in stone."

"There is no way out of the imagined order. When we break down our prison walls and run towards freedom, we are in fact running into the more spacious exercise yard of a bigger prison."

- From a biological viewpoint, rights don't exist—birds fly because they have wings, not because they have the right to fly. Women can give birth, but it doesn't give them the right nor obligation to bear children.



In order to be stable, an imagined order must meet 3 criteria:

- Exist in our material world. Individualism is made real when we have private homes, when people recognize our contributions or seek permission to use our things.
- Be linked to our personal desires. Today, Romanticism and Consumerism are 2 of the biggest imagined orders. *Romanticism* teaches us find our sense of self by having more experiences—to open ourselves to more emotions, see more cultures etc. *Consumerism* teaches us to consume as much goods and services as possible, be it dining and traveling experiences or skills and knowledge. Today, your wife may want you to bring her on a romantic trip to Paris, whereas in ancient Egypt, she would've wanted you to build a tomb for her; such desires are merely reflections of our imagined orders.
- Be inter-subjective. An *objective reality* (e.g. gravity) exists regardless of whether we believe it. A *subjective reality* exists only in an individuals' mind (e.g. a child's imaginary friend). An *inter-subjective* reality is a subjective belief held by many people; it persists even if several people stop believing it.



Many of history's key drivers—law, money, gods, nations—are intersubjective. They involve a large number of believers, elite and masses alike. Often, these beliefs are so deeply indoctrinated from childhood that people mistake them as objective realities. The only way to change an inter-subjective belief system is to get lots of people to believe in an even bigger imaginary order, e.g. personal freedom instead of the glory of an empire.



Keeping Records

Other animals don't need lawyers or written rules to operate. However, Sapiens' systems are based on imagined truths which cannot be encoded in DNA.



Writing was instrumental in helping us to preserve vital data like laws, tax payments, debt and property ownership. Numbers also became an important form of language, allowing us to think in quantitative terms and deal with concepts like relativity and quantum mechanics which would otherwise be hard to grasp.



With more data, we needed processes to catalogue, store and retrieve the data. These gave rise to bureaucracy and compartmentalized thinking based on categories and labels (as opposed to free association and holistic thinking). Today, we're relying on increasingly-smarter computers to process data better than us. It's possible that computers can one day become intelligent enough to replace humans altogether.

The Unification of Humankind



Our culture is the sum of the instinctive ways we think and act.

- Every culture has its norms, values and beliefs. These constantly change and often clash, yet we have a unique ability to hold contradictory beliefs and values, e.g. we may believe in freedom and equality, yet we accept that a society needs rules and hierarchy to function.
- We tend to think of the world in terms of "us" vs "them". For the bulk of history, Sapiens lived in isolated pockets, totally ignorant of others' existence. Over time, these small/simple cultures connected and gradually converged into fewer large/complex cultures. Today, most of us think of the planet as a whole, sharing similar concepts like nation-states, currencies, and legal systems. There are 3 major unifiers of mankind—money, empire and religion.



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

"Writing was born as the maidservant of human consciousness, but is increasingly becoming its master."

"Every culture has its typical beliefs, norms and values, but these are in constant flux."

"Over the millennia, small simple cultures gradually coalesce into bigger and more complex civilisations, so that the world contains fewer and fewer megacultures, each of which is bigger and more complex."



Money



- Hunter-gatherers and early farming communities transacted by bartering goods. However, this became exponentially more complex as more goods were involved.



Money became the solution; it allowed sellers to price their goods using a single currency, and convert anything into anything else.

- Money is an inter-subjective reality. It has value only because we trust others to accept it in exchange for what we want.
- We started with currencies that had value, like barley and gold/silver. As our trust in money grew, we moved to fiat currency with no intrinsic value, and now electronic currency with no physical existence.



Money made it possible for strangers and even rivals to cooperate. However, it also diluted human relations and values. Starving parents used to sell their kids to slavery and we tend to lose trust in people if they run out of money.



Empire



In the last 2,500 years, empires (which ruled over multiple peoples, cultures and territories) were the most common political system, and a driver of cultural convergence.

- Typically, the conquered peoples were mass slaughtered and assimilated, such that they forgot their origins over time. Egyptians think of themselves as Arabs, when their Egyptian ancestors were actually crushed by the Arabs in the 7th century. The Zulus in South Africa are in fact descendants from tribes that fought *against* the Zulu Empire in the past.
- The cultures that spread are usually a hybrid between that of the ruling elite and the new subjects. A common culture facilitates the flow of ideas/goods/people across borders, and gives the elites legitimacy for bringing a “superior culture” to the conquered lands. For example, Qin Shi Huangdi was hailed as the emperor who united China and brought the golden ages of order and justice.



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

“Money is...a universal medium of exchange that enables people to convert almost everything into almost anything else.”

“Money is the most universal and most efficient system of mutual trust ever devised.”

“Most imperial elites earnestly believed that they were working for the general welfare of all the empire’s inhabitants.”



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

"As of 2014, the world is still politically fragmented, but states are fast losing their independence."

"Today religion is often considered a source of discrimination, disagreement and disunion. Yet...religion has been the third great unifier of humankind, alongside money and empires."

- Despite the bloodshed and loss of culture, empires often brought progress, e.g. armies and technology. Indians' democracy, command of English, railway network, legal system, cricket, tea culture etc., are all legacies from being a former British colony.
- Today, the world is still divided politically, but nation-states have much less independence, due to international NGOs, global markets and agendas like global warming and human rights.



Religion



A religion must have binding norms and values which are based on a superhuman order. It legitimizes imagined realities (e.g. "eating pork is a sin") by claiming they come from a superhuman entity.



Over time, mankind has embraced various religions. Today, most of us share certain ideologies and adopt a mix of beliefs and practices.

- Animists see human beings as merely one of the creatures inhabiting the world and should live in harmony with other plants and animals, e.g. cutting a tree would anger the tree spirit.
- As Sapiens became farmers, we wanted control over our animals. Theism (belief in Gods) emerged. Farmers treated Gods as mediators, sacrificing animals in return for a bumper harvest.
- Polytheists believe in multiple supreme gods (e.g. Zeus, Apollo, Hera), each with a subset of power, interests/biases and can be negotiated with. Polytheists are more open-minded and accepting of pluralist gods from other religions/cultures.
- Monotheists believe in only 1 supreme God; they tend to be more fanatical and missionary, often trying to discredit and even eliminate other religions. Both Christianity and Islam were beliefs held by minority groups, but were spread universally by their single-minded followers. Christians

even prosecuted other Christians to defend their interpretation of the religion.

- Dualism says that there are 2 powers—a good and a bad. Many Monotheists today hold dualistic beliefs (e.g. God vs Devil, Heaven vs Hell), which were not found in the Old Testaments.
- Today, the main religion is probably Syncretism, i.e. the blend of ideas and practices from various sources. Most Monotheists also concurrently embrace capitalism, liberalism etc.



Humanism (the worship of humans) is the leading ideology today, coexisting with other religions. It has 3 main branches:

- Liberal Humanism (the most dominant) focuses on humans' sacrosanct right for freedom and equality.
- Social Humanism focuses on human equality in a collective way.
- Evolutionary Humanism focuses on our species' progress. According to science, humans have no souls or free will; human behaviors are all about hormones, genes and synapses, which can be manipulated or enhanced. If this became the dominant ideology, it could drastically change present judicial and political systems.

The Scientific Revolution



A Leap in Progress



Since the Cognitive Revolution, humans have sought to understand the universe. However, science brought a massive leap because:

- It admits that we don't know everything, and any assumption can be proven wrong; and



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

"99 per cent of Buddhists did not attain nirvana....they devoted most of their present lives to the pursuit of mundane achievements."

"At the dawn of the third millennium, the future of evolutionary humanism is unclear."

"The willingness to admit ignorance has made modern science more dynamic, supple and inquisitive than any previous tradition of knowledge."

- It links observations and mathematical tools into comprehensive theories, which can then be tested and applied to new solutions.



By contrast, religious texts were treated as the whole and absolute truth. Lightning was believed to be a sign of Gods' wrath, until Benjamin Franklin disproved it with lightning rods. Malnutrition, disease and even death are now seen as problems to be solved by science rather than left to the will of God.



However, science is still driven by economic, political, and religious agenda. Ultimately, the people/institutions who provide the funds decide where to focus scientific research and how to apply the discoveries. Indeed, our explosive scientific progress can be attributed the interaction of science, empire and capital.



Science + Empire



From 1750-1850, several Western Europe nations became economic powerhouses. Other western nations followed suit, but not the Arab world, India and China. It was not because Europeans were technologically superior, but because science and capitalism gave them a huge appetite for exploration and conquest.

- Admiral Zheng He of the Chinese Ming dynasty also led many sea expeditions; in fact, his ships and fleet sizes were hundreds of times bigger than Columbus'. Yet he didn't try to conquer other countries; his focus was on exploration and assisting pro-Chinese rulers.
- Europe's series of territorial conquests started after European intellectuals started working with capitalists for profit. As they "discovered" distant lands, they claimed them for their kings, killing and enslaving entire populations.
- In 1517, 300 Spaniards landed in Mexico, home of the powerful Aztec empire with millions of people. The Spaniards pretended to be friendly diplomats, then held the Aztec king hostage while they planned a coup. By the time the Spaniards were kicked out, they had cultivated a local



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

"Science is unable to set its own priorities. It is also incapable of determining what to do with its discoveries."

"Most scientific studies are funded because somebody believes they can help attain some political, economic or religious goal."

"What made Europeans exceptional was their unparalleled and insatiable ambition to explore and conquer."

"For modern Europeans, building an empire was a scientific project, while setting up a scientific discipline was an imperial project."

rebel base. Once the rebels overthrew the Aztec rulers, the Spanish colonists killed 90% of the local population and imported African slaves to fill the vacuum.

- The same story was repeated elsewhere. Being ignorant of the outside world, the locals didn't know what to expect. The Europeans were like aliens from space—they arrived in strange vessels, looked and smelled different. The Ottomans, Indians and Chinese also heard of the western “barbarians” but dismissed them as being too far away; the Europeans eventually invaded Asia.



Science also helped to legitimize European conquests so they could rule over populations far bigger than theirs.

- The imperialists did bring modern medicine, railroads, judiciary systems etc. to the conquered lands, and financed the study of local linguistics, botany, geography and history. These gave ideological justifications of progress and knowledge acquisition.
- Western scholars also used scientific theories to argue that the Aryans—tall, blue-eyed, blond, fair-skinned and super-rational—were a superior race meant to dominate the inferior races.



Science + Capitalism



Money can convert anything to anything else. However, the pie remains fixed if you can only use existing money to buy what already exists. **The ultimate driver for our modern economy is growth, powered by credit.** Credit works on the belief that something built today can bring far more returns in the future. This trust in the future allows credits to be given, creating real economic growth to generate even more trust and credit.



Capitalism says that wealth is good because it'll be reinvested in productive activities to bring even more wealth. Some even argue that the market should operate freely with no political interference.



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

“Histories of botany have little to say about the suffering of the Aboriginal Australians, but they usually find some kind words for James Cook and Joseph Banks.”

“The European empires did so many different things on such a large scale, that you can find plenty of examples to support whatever you want to say about them.”

“Credit is the difference between today's pie and tomorrow's pie.”

“This is the fly in the ointment of free-market capitalism. It cannot ensure that profits are gained in a fair way, or distributed in a fair manner.”



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

"For better or worse, in sickness and in health, the modern economy has been growing like a hormone-soused teenager. It eats up everything it can find and puts on inches faster than you can count."

"Any type of energy, anywhere in the world, might be harnessed to whatever need we had, if we could just invent the right machine."

"(Animals) pass their entire lives as cogs in a giant production line, and the length and quality of their existence is determined by the profits and losses of business corporations."

"The human species and the global economy may well keep growing, but many more individuals may live in hunger and want."

"Ecological degradation is not the same as resource scarcity."

- In reality, the rich don't always reinvest their wealth. Money wasted on luxuries doesn't create future growth. An unregulated business may also try to maximize profits by exploiting its workers rather than reinvest its resources.
- Without regulation, the market can create huge bubbles, like the Mississippi Bubble of 1719 and the US housing bubble of 2007, which brought massive losses when they burst.



Capitalism needs to be sustained by infinite growth. Can we really grow indefinitely and what will it take?

- Growth requires resources, e.g. energy and raw materials, which are finite. Yet, science has consistently unlocked new energy sources and more efficient ways to use current energy sources. With the right technology, we have potentially unlimited ways to tap energy from the sun, gravity etc.
- To feed our growing population, we mass-produce animals for food like objects in a production line. Studies show that animals *do* have social/psychological needs and can feel both physical and emotional pain. Yet, an average hen today is likely to be fed adequately, but is squeezed into such a tiny cage that it can't flap its wings or stand erect.
- With more products and services being produced, we also need more buyers. Consumerism encourages people consume more and more of things they don't really need. Obesity is great for business—first people spend on food, then they buy medication to lose weight or treat diseases.



Capitalism is likely to only increase the gap between the rich and the poor. Yet, similar to the Agricultural Revolution, we've come so far now that it's too late to turn back the clock.



A Permanent Revolution



Many of mankind's recent/ongoing changes are irreversible.

- There's no doubt our ecosystem is degenerating rapidly. We're permanently losing natural habitats and species as we convert environmental resources into energy and goods,

and replace the oceans and forests with roads and buildings. Wild animals are now a tiny fraction of the number of humans, domesticated animals, and other species like rats and cockroaches.

- We're now all bound to modern clock time. Most human activities are tied to specific timetables and templates, from school to offices, transport networks and TV programs.
- The family and community have been ousted by markets and nation-states. In the past, people depend on the family/community for survival. Today, the laws, tax and other systems protect and hold us accountable as *individuals*; we can travel, communicate, have our own bank accounts etc. Our views are shaped by compulsory education, mass media and the products/services we consume. We even form new *imagined communities* like nationality (e.g. Germans vs Americans) and consumer tribes (e.g. Arsenal vs Liverpool football fans). The family has lost its central role.
- With constant and rapid changes, social order is now seen as a flexible concept rather a fixed ideology.
- We're enjoying more peace today than ever before. The average person is more likely to kill himself than to be killed by a soldier, terrorist or criminal. For the first time in history, war is unlikely, due to global trade and finance, humanist ideologies and the threat of nuclear weapons.



Intelligent design could also shape the future of evolution in at least 3 ways, potentially bringing an end of *Homo sapiens* as a species.

- Biological engineering is being used to modify our biology. Plants and animal genes are already being modified to increase lifespan, good fats etc. Besides transforming living creatures, scientists also aim to bring back extinct species.
- We're increasingly integrating bionic components into our bodies, such as bionic arms that are operated by thought. It's a matter of time before we can create cyborgs or entirely new beings.



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

"It is sobering to realise how often our view of the past is distorted by events of the last few years."

"Any attempt to define the characteristics of modern society is akin to defining the colour of a chameleon. The only characteristic of which we can be certain is the incessant change."

"Real peace is not the mere absence of war. Real peace is the implausibility of war."



READINGGRAPHICS
Ideas Come Alive

KEY QUOTES

"History cannot be explained deterministically and it cannot be predicted because it is chaotic."

"History's choices are not made for the benefit of humans. There is absolutely no proof that human wellbeing inevitably improves as history rolls along...because we lack an objective scale on which to measure such benefit."

- New inorganic life. Today, computer viruses can replicate themselves in cyberspace. It's conceivable that—by design or mistake—we'll one day create a virus that can survive and evolve on its own in cyberspace, giving computers the ability to think consciously like us.

Conclusion



Lessons from History

History cannot help us to predict the future; it can only broaden our perspectives.

- It's easy to look back with hindsight and think we know why things happened. In reality, history is chaotic and can never be predicted. A tiny, seemingly-insignificant variable could trigger an unforeseen series of events. Even if you could accurately predict say, tomorrow's stock prices, the market will respond to your prediction and render it invalid.
- Mankind has undoubtedly transformed Earth and our realities in just a short period of time. With each revolution, Sapiens became more productive and powerful. But, has progress brought us greater happiness? Or has our collective evolutionary success brought only more individual suffering to ourselves and other species (like the cows and pigs in their pens and the mice in the labs)?



While none of us can individually direct history, we can seek to understand it and make conscious choices that collectively influence our future.



Other Details in the Book to Look out For

This book is packed with historical facts, events, research and theories. Harari uses vivid examples that transport you back to the different eras, presents various perspectives and invites you to ponder questions about mankind's rise to dominance and what it means for our present and future. In this summary, we've outlined some of these key ideas. Harari covers many other details, including facts and theories about:

- Sapiens' biological and cultural evolution; and
- Our key milestones (e.g. writing, territorial conquests, technological progress), imagined orders (e.g. social structures, religions), etc.



READINGGRAPHICS
Ideas Come Alive

About the Author



Yuval Noah Harari (born 1976) is an Israeli historian, author and a tenured professor in the Department of History at the Hebrew University of Jerusalem. Harari also authored many books and articles, including international bestseller "Homo Deus: A Brief History of Tomorrow".

Harari has won several awards, including twice winning the Polonsky Prize for Creativity and Originality, in 2009 and 2012.

About ReadinGraphics



READINGGRAPHICS
Ideas Come Alive

ReadinGraphics captures pearls of wisdom from the best books around the world, chunks down concepts into simple, actionable steps, and presents them in graphics that you can absorb at a glance.

We cut through the clutter to bring ideas to life, making it easier to see, organize and apply insights to create breakthroughs.

Find out more about us at <https://readinggraphics.com>



[www.readinggraphics.com](https://readinggraphics.com)



[ReadinGraphics](#)



[ReadinGraphics](#)

KEY QUOTES